

February 10, 1863.

W. H. Flower, Esq., F.Z.S., in the Chair.

Mr. R. Swinhoe exhibited some new and remarkable species of birds collected by himself in the Island of Formosa.

The following papers were read:—

1. DESCRIPTION D'UNE NOUVELLE ESPÈCE DE PERDRIX. PAR  
MM. J. VERREAUX ET O. DESMURS.

(Plate IX.)

PERDIX BARBATA.

P. PERDICI cineræ assimilis, sed magis rufescens; macula frontali, suboculari, et plaga pectorali media nigris; plumis gutturalibus elongatis, lanceolatis, utrinque lateraliter expansis; tarsis rufescentibus.

Mâle adulte. Vertex, occiput et milieu de la nuque d'un brun foncé, varié de roussâtre, avec des flammèches ou stries blanchâtres occupant le centre de chaque plume, et allant en s'élargissant vers le bout; front, face demi-cerise arrivant vers l'occiput, gorge et devant du cou d'un roux-clair, plus vif sur les plumes du centre du cou, ainsi que sur sa large plaque pectorale, au centre de laquelle se trouve une autre grande tache noire; une très-petite tache noire se trouve en avant du front; une autre, au-dessous de l'œil, semble longer la partie supérieure des plumes des oreilles, qui ont une teinte brune variée de roussâtre, et dont les plus longues portent des flammèches blanchâtres. Les plumes de la gorge sont longues et étroites, et les latérales, beaucoup plus longues, forment une barbe qui a quelque analogie avec celle de l'*Otis tarda*. Cou et poitrine et parties latérales du ventre gris-clair, fortement vermiculées sur les deux dernières parties; flancs blanchâtres, avec des bandes obliques plus ou moins larges d'un roux-foncé; cuisses et bas-ventre d'un blanc légèrement grisâtre; couvertures sous-caudales roussâtre-claires, légèrement vermiculées de brun, surtout vers le centre, quelques taches noirâtres à l'extrémité des plus longues; haut du dos gris, finement vermiculé comme la poitrine, et légèrement zoné de brun-roux foncé et de roussâtre-clair. La même distribution règne sur le reste de la partie supérieure; mais elle a une teinte générale plus rousse, excepté sur les couvertures sus-caudales, qui sont très-longues, et où la couleur est plus claire; les bandes transversales brunes, ou brun-roussâtres, sont très-larges vers leur extrémité, et paraissent encadrées de blanchâtre. Ailes d'un cendré brun, avec de nombreux zigzags de même couleur, et des bandes ou taches rousses, et des taches longitudinales blanches au centre; rémiges brunes, avec des taches et des bandes blanchâtres. Les sept rectrices latérales roux-claires, avec un ruban plus foncé vers le bout, qui porte une tache blanche, surmontée même d'une tache plus ou moins bien marquée de noirâtre, les médianes se



Golf, del et lith.

M & N Hanhart, Imp<sup>t</sup>

PERDIX BARBATA.







confondent avec les couvertures. Bec plombé, plus clair vers le bout ; tarses rougeâtres.

	Centim.	Millim.
Longueur totale . . . . .	30	0
— de l'aile fermée . . . . .	16	0
— de la queue . . . . .	7½	0
— du bec, en suivant la courbure	0	14
— du tarse . . . . .	4	0

Cette description a été prise sur un sujet mâle très-adulte, provenant de la Dahourie centrale, à laquelle l'espèce paraît exclusivement confinée, puisqu'elle manque dans la partie septentrionale de cette province qui est baisée, ainsi que dans la partie méridionale qui est aride (celle des steppes sans eaux) ; elle se rencontre aux environs de la ville de Nertschinsk, et dans tout le pays des Mines de Nertschinski-zawod. Elle se tient de préférence dans les champs cultivés et dans les broussailles ; pendant l'hiver elle descend dans les prairies, près des ruisseaux et quelquefois près des habitations. Sa voix et son vol sont les mêmes que ceux de la *Perdix cinerea*, dont elle est facile à distinguer par le noir du front et du dessous de l'œil, et par la large plaque de même couleur qui occupe le centre du ventre, par la teinte rousse de la partie antérieure, par les longues plumes de la gorge et par les tarses rougeâtres. Sa taille est enfin plus petite que celle de la *P. cinerea*.

C'est à l'obligeance de notre savant ami et collègue M. Taczanowski, de Varsovie, que la science est redevable de la connaissance de cette intéressante espèce et des détails qui précèdent. Ceux-ci lui ont été confirmés par M. Watecki, qui a eu fréquemment occasion d'observer et de chasser cette espèce.

Nous espérons être bientôt assez heureux pour en faire connaître la femelle qui nous a été promise par M. Taczanowski.

## 2. ON A NEW SPECIES OF THE GENUS PIPRA, FROM NEW GRANADA. BY P. L. SCLATER, M.A., PH.D., F.R.S., SECRETARY TO THE SOCIETY.

(Plate X.)

M. Verreaux, of Paris, has lately sent me a skin of a Manikin from New Granada closely allied to *Pipra gutturalis* of Cayenne, but easily distinguishable by the smaller size of the gular white, the white crissum, and the entire absence of the white markings in the primaries which are so characteristic of *Pipra gutturalis*. For this new species I propose the name *Pipra leucorrhœa*, with the following characters.

PIPRA LEUCORRHOA, sp. nov. (Pl. X.)

*Splendenti-nigerrima, gutture et lateribus cervicis et crissi plumarum apicibus albis ; primariis intus cinereis ; rostro plumbeo, subtus albicante, pedibus carneis.*

Long. tota 3·3 ; alæ 2·2 ; caudæ 1·2 poll. Angl. et dec.

*Hab.* In Nova Granada int.



*Obs.* Similis *Pipræ gutturali*, sed gutture circumscripte albo, crisso albo terminato et primariis intus cineraceis facile distinguenda.

I should add that the first primary in the single specimen that I possess of this bird is remarkably diminutive, measuring only 0·6 inch from the insertion to the extremity, and being very much narrowed. The second, third, and fourth primaries are also much narrowed towards their terminations. My belief is that this is an abnormal formation peculiar to the male bird, somewhat analogous to that which I have described in *Machæropterus*\*; but before stating this as a certainty, I should wish to see more specimens of the species, as, without spoiling the skin, it is difficult to be quite certain whether the first primaries are fully grown or not.

### 3. A LIST OF DIURNAL LEPIDOPTERA TAKEN IN MADAGASCAR BY MR. CALDWELL. BY W. C. HEWITSON, F.Z.S.

(Plate XI.)

A small collection of Diurnal Lepidoptera from Madagascar, which has been sent to me for examination by Dr. Sclater, is stated to have been formed by Mr. J. Caldwell chiefly in the neighbourhood of Antananarivo, except the *Diadema dexithea*, which was captured near Beforona, just before entering the great forest of Alamazaotra. It contains the following species:—

#### PAPILIO DEMOLEUS.

A common African species.

PAPILIO ORIBAZUS, Boisduval, *Spécies Général des Lépidoptères*, p. 223.

A very rare species, the only examples of it sent to Europe up to the present time being two specimens in the collection of Dr. Boisduval of Paris. The males of the nearly allied species *P. nireus* (of which *P. erinus* of G. R. Gray is only a variety), *P. phorbanta*, and *P. disparilis* have each on the underside of the posterior wing a submarginal band of silvery white spots, whilst this species, which is without these said spots, closely resembles their females, and in this respect is most nearly allied to *P. charopus* of Westwood.

PIERIS PHILERIS, Boisduval, *Faune Entom. de Madagascar*, pl. 2. f. 3, 4, 5.

PIERIS MESENTINA, Cramer, pl. 270.

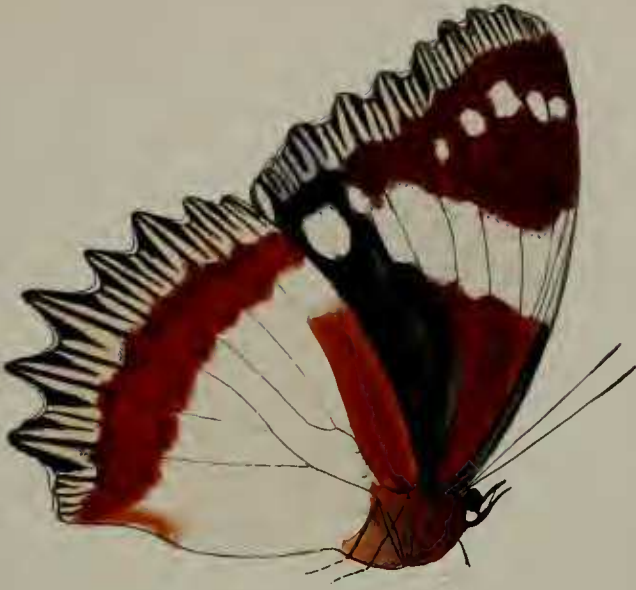
A species common to Africa and India as well.

ACRÆA RAKELI, Boisduval, *Faune Ent. Madagas.*, pl. 5. f. 1, 2.

ACRÆA ZITJA, Boisd. *Faune Ent. Mad.*, pl. 4. f. 4, 5.

ACRÆA SERENA, Godart.

\* See P. Z. S., 1860, p. 90; and Ibis, 1862, p. 175.







## ACRÆA OBEIRA, Hewitson.

*Alis diaphanis; anticis basi rufo, apice fusco; posticis dimidio basali rufo, maculis quindecim nigris, margine exteriore fusco.*

Upperside transparent, glossy. Anterior wing with the base rufous, the apex brown. Posterior wing rufous from the base to beyond the middle, marked with fifteen black spots; five at the base, two before the middle, followed at the middle by a curved band of eight larger spots, two of which in the middle of the band touch each other, the outer margin brown.

Underside as above, except that the margins are much paler and the rufous portion of the posterior wing nearly white.

I have adopted the name by which Dr. Boisduval has proposed to call this species.

## VANESSA CARDUI, Linnæus.

JUNONIA RHADAMA, Boisduval, Faune Ent. de Madagascar, pl. 7. f. 2.

## DIADEMA DEXITHEA, Hewitson. (Pl. XI.)

*Alis dentatis, lunulis marginalibus albis; anticis nigris, in medio fascia obliqua lata maculisque quatuor apicalibus albis; posticis dimidio basali albo; pone medium fascia transversali rubra; margine exteriore nigro.*

Upperside black: the wings dentated, the outer margins with lunules and lines of grey-white. Anterior wing crossed obliquely at the middle by a broad equal band of white, with between it and the anal angle two spots (one minute touching the band) of the same colour; a band of four small white spots near the apex. Posterior wing with the basal half cream-colour, bordered below with a band of brick-red; the base, the costal, and outer margins black.!

Underside as above, except in colour; the black of the upperside is below brick-red. The anterior wing has the inner margin broadly black. The costal margin of the posterior wing is interrupted by a white spot.

In its general appearance this species most nearly resembles the female of *D. lasinassa*; in the arrangement of the nervures it agrees with *D. dubia* and *D. anthedon*. The cell of the anterior wing is open; the cell of the posterior wing is closed.

For the great pleasure of possessing and making known this most valuable and remarkable addition to the diurnal *Lepidoptera* I am indebted to the kindness of Dr. Sclater. The rich collection of Dr. Boisduval contains the only other example which has, I believe, yet reached Europe.

## EREBIA TAMATAVÆ.

*Satyrus tamatavæ*, Boisd. Faune Ent. de Madagascar, pl. 8. f. 6, 7.

4. DESCRIPTIONS OF SOME NEW SPECIES OF SHELLS, COLLECTED AT VANCOUVER ISLAND AND IN BRITISH COLUMBIA BY J. K. LORD, ESQ., NATURALIST TO THE BRITISH NORTH-AMERICAN BOUNDARY COMMISSION, IN THE YEARS 1858-1862. BY W. BAIRD, M.D., F.L.S.

1. CHRYSODOMUS TABULATUS, Baird.

Ch. *testa fusiformi, aspera, confertim lirata, liris inæqualibus, minute squamatis; anfractibus sex seu septem, superne concavo-angulatis seu canaliculatis, ultimo magno, trientes duos longitudinis testæ adequante, et antrorsum in canalem flexuosum desinente, suturis distinctis; labro interno super columellam inflecto, umbilicum tegente.*

Long. 3 inches; lat.  $1\frac{1}{3}$  inch.

Hab. Esquimalt Harbour, Vancouver Island. (*Mus. Brit.*)

Only one specimen of this species was collected, and it had for some time been the abode of a hermit-crab. It is of a perfectly fusiform shape, and the upper parts of the whirls next to the suture are flattened and hollowed out into broad channels. The surface is encircled with numerous, close-set, raised striæ, which are of unequal size, every fourth one being larger than any of the intermediate ones, and all roughened by numerous small scales. The whirls are six or seven in number (the upper ones being unfortunately broken off), and rapidly increase in size, the last being two-thirds the length of the whole shell. The columella is covered with a turned-over plate of the inner lip, the umbilicus being partially concealed by it. The lower canal is of considerable length, and is bent to one side. The mouth appears to be rather small in proportion to the size of the shell. When taken, it was inhabited by a species of *Pagurus*, and, as is customary with shells similarly inhabited, was considerably injured by its parasitic tenant.

2. VITULARIA ASPERA, Baird.

Vit. *testa fusiformi, purpurea, scabra, elongata, longitudinaliter plicato-costata, transversim lirata, liris crebris et minutissime squamatis; anfractibus sex, ultimo trientes duos longitudinis testæ adequante, in canalem rectum, longiusculum, apertum, desinente; columella planulata, fauce albida; labro externo intus dentato, extus serrato; operculo oblongo, nucleo in margine externo sito.*

Long. 1 inch; lat.  $\frac{1}{2}$  inch.

Hab. Esquimalt Harbour, Vancouver Island. (*Mus. Brit.*)

This shell partakes much of the character of a species of *Murex*; but the oblong operculum, with its nucleus situated on the external edge towards the middle, places it among the *Buccinidæ*. It is of a purple colour; and the surface of the shell is rough, with numerous small scales on the raised striæ which encircle it. The longitudinal plaits or varices are about ten in number, and are least distinct on the last whirl. The mouth is ovate, and the canal of moderate length and straight.

## 3. CHEMNITZIA VANCOUVERENSIS, Baird.

Ch. *testa elongato-turrita, cylindrica, longitudinaliter oblique forte costata; anfractibus novem, ultimo superne indistincte costato, infra lævigato; apertura parva, rotundato-ovata; suturis impressis.*

Long.  $\frac{1}{4}$  inch.

Hab. Esquimalt Harbour, Vancouver Island. (*Mus. Brit.*)

“Taken from the crop of a Pin-tail Duck.”—*J. K. Lord.*

This shell is peculiarly ribbed. The eight upper whirls are strongly and somewhat obliquely ribbed; but on the last, which is the largest, the ribs are indistinct on the upper half, and on the lower half disappear altogether. The interstices between the ribs, which in the penultimate whirl are about sixteen in number, appear smooth. The sutures are deep and well marked. The mouth is rather small, and is somewhat rounded-ovate. In consequence of its having been in the crop of a duck, the surface of the shell is somewhat eroded, and the apex is broken off.

## 4. AMNICOLA HINDSII, Baird.

Am. *testa retusa, solidula, viridi-olivacea, minute longitudinaliter undulato-striata, transversim obscure lirata, apice erosa; anfractibus quatuor, ultimo prope medium retuse-carinato, ad suturas canaliculato, suturis impressis; columella albida; apertura cærulescente.*

Long., largest specimens, nearly  $\frac{1}{2}$  inch; lat. rather more than  $\frac{1}{3}$  inch.

Hab. River Kootanie, and stream at the foot of the Rocky Mountains, British Columbia. (*Mus. Brit.*)

This species resembles somewhat the *Paludina seminalis* of Hinds, but it differs in contour, being bluntly carinate round the middle of the last whirl, and in being channeled round the suture. The surface of the shell is distinctly marked with numerous flexuous striæ, the lines of growth, and near the sutures is rather indistinctly marked with circular striæ. I have named it after a good conchologist, who has described several shells from the West Coast of America, and who obtained the specimens of his shell from the Rio Sacramento, California.

## 5. BULLINA (TORNATINA) EXIMIA, Baird.

B. *testa cylindræa, viridi-lutescente, striata; striis minutis, confertis, undulatis; spira concava, excavata; apertura longa, ad basin effusa; labro acuto, columella prope basin subito arcuata.*

Long.  $\frac{1}{2}$  inch.

Hab. Esquimalt Harbour, Vancouver Island. (*Mus. Brit.*)

Two or three specimens of this pretty species of *Bullina* were dredged, with the animals alive, in 12 fathoms water; and several others were taken out of the stomach of a Pin-tail Duck shot in the harbour. The shell is cylindrical, and minutely striated with numerous flexuous lines. The spire is very short and concavely excavated;

while the aperture is of considerable length, and the columella at the base suddenly arched.

6. *SUCCINEA HAWKINSII*, Baird.

*S. testa elongato-obovata, tenui, pellucida, nitida, undulato-striata, rubella, intus margaritacea, spira acuta; anfractibus quatuor, convexis, ultimo duos trientes longitudinis testæ adequante, sutura impressa, apertura ovali, inferne effusa.*

Long.  $\frac{3}{4}$  inch; lat.  $\frac{1}{3}$  inch.

*Hab.* Lake Osoyoos, British Columbia. (*Mus. Brit.*)

This shell is of an elegant form, and of a pinkish colour, with the interior of a pearly lustre. It is smooth and shining, but marked with waved striæ of lines of growth. It resembles very much in figure the *Succinea pfeifferi* of Europe, but is of a still more elegant shape, and of a brighter hue.

I have named it after Lieut.-Col. Hawkins, R.E., Commissioner of the British North-American Boundary Commission.

7. *LIMNÆA SUMASSII*, Baird.

*L. testa elongata, attenuata, cornea, fragili; anfractibus sex, ultimo cæteris duplo majore; apertura mediocri; columella forte plicata; superficie externa, sub lente, creberrime et minutissime decussata.*

Long., largest,  $1\frac{1}{6}$  inch; lat.  $\frac{1}{3}$  inch.

*Hab.* Sumass Prairie, Fraser River, British Columbia. (*Mus. Brit.*)

This species of *Limnæa* approaches *L. elodes* of Say, but is more elongated, more fragile, and has the columella very strongly plicated. The surface of the shell, when seen under a lens of moderate power, is finely decussately striated. It is of a horny colour, and is of an elongated shape.

8. *PHYSA LORDI*, Baird.

*Ph. testa tenui, majuscula, cornea, tumida, gibbosa, apertura magna; labro acuto, linea alba seu fusca externe notato; superficie externa minutissime decussata; anfractibus sex, duobus primis minutis, nigro tinctis, ultimo tumido, cæteris quadruplo majore.*

Long. from  $\frac{3}{4}$  to 1 inch; lat. from  $\frac{1}{2}$  to  $\frac{3}{4}$  inch.

*Hab.* Lake Osoyoos, British Columbia. (*Mus. Brit.*)

This species is one of the largest of the genus, and is much swollen and gibbous. The outer lip is generally marked with a streak of brown edged with white, which mark is left in those specimens which are of older growth, leaving a white callous-looking line of growth edged with brown, nearly in the centre of the last whirl, which is very large, being about four times the size of all the others put together. The two upper whirls, which are very small, are of a black colour. The surface of the shell is finely decussately striated.

The *Physa heterostropha* of Say abounds in the Sumass Prairie, on the Fraser River; but its place seems to be taken on the higher ground towards the Rocky Mountains by the *Ph. lordi*.



## 9. ANCYLUS KOOTANIENSIS, Baird.

*A. testa ovata, cinerea, concentricè striata, vertice antico, obtuso; intus nitida.*

Long.  $\frac{1}{4}$  inch; lat.  $\frac{1}{4}$  inch.

*Hab.* Rivers Kootanie and Spokane, British Columbia. (*Mus. Brit.*)

The shell is of an ovate form, and is concentrically striated, though the striæ only appear on the lower two-thirds of its surface, the apex being smooth and shining. Internally the shell is shining and somewhat pearly.

## 10. CHIONE LORDI, Baird.

*Ch. testa minuta, ovato-trigona, nitida, concentricè transversim sulculata, umbonibus prominulis, nitidissimis, lunula nulla, extus lutescente seu albidi-olivacea, intus alba, marginibus tenuissime crenulatis; sinu pallii brevi, obtusa.*

Long. nearly  $\frac{1}{4}$  inch; lat. rather less than  $\frac{1}{4}$  inch.

*Hab.* Esquimalt Harbour, Vancouver Island. (*Mus. Brit.*)

This shell was taken in considerable numbers from the crop of a Pin-tail Duck, shot in the Harbour of Esquimalt, Vancouver Island, November 23rd, 1858.

It is a small species, of an ovate-triangular shape, a smooth shining appearance, and a light olive colour. The surface is concentrically marked with slight grooves. The beaks are prominent and very shining. Internally the surface is white, the margins of the shell very finely crenulate, and the pallial impression short and blunt.

## 11. SPHÆRIUM (CYCLAS) TUMIDUM, Baird.

*Sph. testa ovato-trigona, tumida, olivacea, conferte transversim concentricè forte costata; umbonibus prominentibus, necnon erosis; interne cærulescente; margine ventrali rotundato.*

Long.  $\frac{1}{2}$  inch; lat. rather more than  $\frac{1}{2}$  inch.

*Hab.* Sumass Prairie, Fraser River, British Columbia. (*Mus. Brit.*)

This shell is of a tumid, swollen figure, and of an ovate-trigonal shape. The colour externally is dark olive, and it is strongly ribbed concentrically. The beaks are prominent, and frequently eroded. The inner surface is of a bluish tint. The ventral or lower margin is rounded.

## 12. SPHÆRIUM (CYCLAS) SPOKANI, Baird.

*Sph. testa rotundato-ovata, cornea, concentricè transversim conferte minute striata, nitida, sub lente obsolete punctata; umbonibus rotundatis, obtusis; interne albida; margine ventrali rotundato.*

Long. rather less than  $\frac{1}{2}$  inch; lat. rather more than  $\frac{1}{2}$  inch.

*Hab.* Rivers Spokane and Kootanie, British Columbia. (*Mus. Brit.*)

This shell is smaller than the preceding, more rounded, and with more obtuse beaks. The striæ or riblets are much less distinct; the colour is pale horny externally, and white internally. It has a shining appearance; but when examined by the lens, the surface is seen to be indistinctly punctate. The specimens taken from the Spokane River are much larger than those collected in the Kootanie.

## 13. LYONSIA SAXICOLA, Baird.

*L. testa ovato-oblonga, medio gibba, tenui, fragili, antice producta, clausa, postice compressiuscula, hiante; umbonibus magnis, incurvis; epidermide olivacea, striata; margine dorsali rectiusculo, margine ventrali flexuoso, hiante.*

The length of a moderate-sized specimen is about 3 inches, of a large specimen  $4\frac{1}{2}$  inches; the breadth from the beaks to the ventral margin is about 2 inches and  $2\frac{1}{2}$  inches.

*Hab.* Holes in rocks in Esquimalt Harbour, Vancouver Island. (*Mus. Brit.*)

This species is the largest of the genus that has yet been discovered. It is of an ovate-oblong shape, gibbous in the centre, produced anteriorly, compressed posteriorly and gaping. The beaks are large and incurved: it is covered with an olive-coloured epidermis, which is striated transversely. The ventral margin is gaping and flexuous. This species resembles considerably the *L. navicula* of Adams and Reeve ('Zoology of the Voyage of the Samarang'), from the Sooloo Sea, and might be taken for a very large specimen of it, and, indeed, is considered to be so by Mr. Adams himself, who informed me he had taken identically the same species, as to size, &c., from the seas of Japan. Besides the size, habitat, and place of abode, this species differs from *L. navicula* in the form of the anterior extremity of the shell and the more gaping ventral margin. Owing to the peculiar place of abode (holes in the rocks), it varies considerably in size and form; but in all the specimens which I have seen, ten in number, it does not vary in the produced anterior extremity. The striæ seen on the surface of the epidermis do not appear to extend from it to the shell underneath. It lodges always, Mr. Lord says, in holes in the rocks, from which it is very difficult to extract it, without breaking it; for it would appear to take up its abode in a small hole, enlarging it as it increases in size itself. The substance of the shell, without being very thin, is exceedingly brittle; and few specimens were brought over without being cracked across in various places, apparently in the act of drying. The ossicle covering the front of the internal cartilage is strong and well developed.

## 14. CRASSATELLA ESQUIMALTI, Baird.

*C. testa parva, cordato-trigona, crassiuscula, olivacea, transversim undato-plicata, antice producto-rotundata, postice subtruncata, margine ventrali rotundata, umbonibus prominulis, lunula longe caudata.*

Long. rather more than  $\frac{1}{3}$  inch; lat. nearly  $\frac{1}{2}$  inch.

*Hab.* Esquimalt Harbour, Vancouver Island. (*Mus. Brit.*)

This species approaches very much in sculpture to the *C. corrugata* of Adams and Reeve ('Zoology of the Voyage of the Samarang'), from the Sooloo Sea, but differs very much in shape. The peculiar undulate plications are chiefly discernible near the umbones, the plicæ or ribs on the lower third of the shell being plain. The beaks are nearly central and prominent; the anterior extremity is somewhat produced, while posteriorly the shell is somewhat truncate. Only one specimen was found by Mr. Lord.